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April 26, 1994

Mr. William F. Caton  
Acting Secretary  
Federal Communications Commission  
1919 M Street, N.W., Room 222  
Washington, D.C. 20554

Re: Notice of Ex Parte Contact  
PR Docket No. 93-61

Dear Mr. Caton:

Pursuant to Section 1.1206 of the Commission's Rules, notice is hereby given of an ex parte communication regarding the above-referenced proceeding. The instant notice is being submitted in duplicate.

On April 26, 1994, the undersigned and John J. McDonnell of this office, as counsel to MobileVision, L.P., met with Richard Engelman, Chief, Technical Standards Branch, Office of Engineering and Technology, to discuss matters relating to the issues in this proceeding. The content of the discussion is reflected in the attached material excerpted from earlier filings of MobileVision.

Please associate this material with the record in this proceeding.

Sincerely,

REED SMITH SHAW & McCLAY



Marnie K. Sarver

Enclosure

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**MOBILEVISION RECOMMENDATIONS**  
[Reprinted from Further Reply Comments  
of MobileVision, L.P.,  
submitted March 29, 1994]\*

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The following recommendations and other changes to the NPRM are designed to address concerns that have arisen during the rulemaking proceedings in PR Docket No.

93-61:

- "1. Reallocate the spectrum for wideband spread spectrum LMS providers to 902-910 MHz and 920-928 MHz and provide protection on such spectrum to the first licensee to build on each such band as set forth in these suggested changes. This reallocation should be expressly conditioned on the adoption of changes to the forward link allocations and the adherence to strict out of band emission limits in adjacent frequency bands as set forth below. Otherwise, the operation of LMS systems in the reallocated bands will not be possible.
2. Move the forward link for each wideband provider to the same provider's licensed 8 MHz bandwidth, subject to the grandfathering provisions set forth in these suggested changes, since with the shift of band allocation the current forward links will create intolerable interference.
3. Require strict adherence to out of band emission limits not only within 902-928 MHz band but in connection with users of the frequencies above and below that band.
4. While allowing Part 15 users on a secondary basis in the spectrum reserved for wideband LMS providers (902-910 MHz and 920-928 MHz), provide for narrowband LMS use and Part 15 use in the middle spectrum (910-920 MHz), as well as for any developmental licenses, thus providing for both a contiguous 10 MHz band for the narrowband users, as their comments suggest they need, and a safe haven for those Part 15 users that anticipate interference to or from wideband LMS providers. This allocation is consistent technically with narrowband provider comments regarding their tolerance to interference from Part 15 users.
5. Establish tolerance standards for interference from Part 15 users in the wideband and narrowband allocated spectrum. In those isolated instances where existing Part 15 devices in use would interfere with wideband providers, even after coordination, in the 902-910 MHz and 920-928 MHz bands, require, as necessary, migration to the middle spectrum (910-920 MHz) or other spectrum outside the LMS band. Because such instances of required migration are anticipated to be

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\* For the purpose of presenting the excerpts, certain footnotes, unnecessary for the presentation, have been deleted.

minimal, MobileVision submits that wideband providers should be required to defray or absorb reasonable costs of migration to such frequencies where that cost is a hardship to existing Part 15 users existing on the Effective Date of the rules.

6. Permit wideband spread spectrum systems that claim and can demonstrate the ability to share with narrowband and Part 15 users the use of the middle band (910-920 MHz) on a secondary basis.<sup>1</sup>
7. In those markets where system infrastructure has already been deployed or systems are operating on the current bands or with forward links in the other band allocated for wideband systems, the Interim Rules for allocation should be grandfathered until migration to the new sub-bands and forward links can be coordinated by the currently deployed or operating systems but in no event later than two years.

With regard to the tolerance standards for Part 15 users in the bandwidth allocated for wideband LMS use (# 5 above), Teletrac has proposed a definition of harmful interference that considers the interference from one source compared to the average interference and noise floor. It suggest that the single source interference should exceed the average interference by 10 dB for more than 20% of the time before it is considered harmful. The problem with the tern "average interference level" is that if, for example, there are two interferers, one could argue that they form a average level, and hence neither exceeds it. Moreover, it an interferer is blocking 20% of the signals, that is still a very significant desensitization. MobileVision would suggest a simpler definition as follows:

Interference from a secondary device, e.g., Part 15, shall be considered harmful if it causes the LMS receiver to be desensitized by more than 10dB.

The various LMS systems could be affected differently by the amount of time that the interfering signal is present, and therefore it is difficult to define a time limit. If the interference level is high, but is short enough not to cause significant problems to a particular LMS system, then presumably, that LMS system will not complain.

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<sup>1</sup> Since both Pinpoint and AMTECH claim that Pinpoint could share its spectrum with Part 15 and narrowband, if Pinpoint were to move to this 10 MHz band, it would increase potential competition while protecting the other wideband providers who have indicated that they could not time-share with Pinpoint as it proposes.

In order to insure the avoidance of interference between wideband LMS systems, when two licenses exist in the same wideband allocation, MobileVision proposes the following rules:

- Thirty days prior to commencement of system construction in any area, a wideband licensee that wishes protection from interference must file a certification indicating that its system is not a test/beta system and is currently capable of deployment on a commercially available basis to avoid frequency speculation schemes.
- Where two or more current licensees (i.e., entities holding licenses as of the date new rules are adopted) have provided certifications in a particular geographic area, the first wideband LMS system to construct a system in its authorized 8 MHz band in that area, and offering service to the market, will be afforded protection from interference caused by other licensees or future LMS co-channel users that results in degradation of service at fixed sites or mobile units.
- Any subsequent LMS service providers proposing to provide service in the same frequency band and in the same service area must operate on a non-interfering basis with the first system entitled to interference protection.

In addition, as MobileVision indicated in its Further Comments, the NPRM separation of wideband and narrowband systems reflected in the Interim Rules should be maintained, but existing narrowband sites should be grandfathered after coordination with wideband providers.

To avoid the current ambiguity in defining permissible communications, which ambiguity is apparent from MobileVision's ex parte communications with the Commission wherein no single definition of ancillary services has been offered, MobileVision also indicated that the definition of LMS should be as follows:

**The use of non-voice signalling methods from and to radio units to make known the location of such units. LMS systems may also transmit and receive ancillary voice and non-voice communications to and from the units being located.**

This definition will allow the marketplace to define its needs while making it clear that the primary service is location. To do otherwise would require a Commission ruling for each variant or new ancillary service; thus creating delay and uncertainty for the provider and an unmanageable policing and ruling function for the Commission.

MobileVision's Further Comments also proposed that any concerns about adequate competition can be addressed through the following provisions for licensing and resale of LMS services:

- Each wideband LMS provider in a market would be required to resell system capacity to a maximum of two other competitors under conditions that will ensure the integrity of the service.
- At their option, resellers could buy their mobile equipment from the system provider or be licensed to manufacture and use such mobile equipment.

MobileVision submits that those proposed variations to the Interim Rules are fair and workable for all concerned interests. But should the Commission conclude that the record in this proceeding is simply too confused and contradictory to support those proposals, MobileVision strongly urges that the Commission simply continue the Interim Rules, on which the pioneers in LMS have relied in system development and capital investment and to which all parties have been subject for twenty years, with only the minor clarifications as set forth above providing that wideband licensees who are first to build in a licensed market should be protected from interfering systems who subsequently wish to also enter that market on the same frequencies and redefining LMS services as described above. After a period of several years or at such time as the Commission has determined that the marketplace has matured to the point that technical and economic requirements are more clearly definable,<sup>2</sup> the promulgation of permanent rules can be reconsidered. Until then, the allocation scheme and other conditions contained in the Interim Rules should continue in effect<sup>3</sup> and upon adoption of permanent rules all who have deployed systems in the interim

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<sup>2</sup> In 1974, it was the intention of the Commission that permanent rules would follow the development of those conditions based on experience. Until recently, market conditions have not created an environment in which this has occurred. Should the Commission choose to defer the adoption of final rules at this time, the market conditions do exist to permit rapid development and deployment sufficient to establish "real life" experience and market data rather than hypothetical assumptions to define those conditions.

<sup>3</sup> Including the required separation of wideband and narrowband licensing and the secondary status of Part 15 users to LMS within the spectrum.

should be grandfathered. The indefinite continuation of this proceeding, however, is crippling the ability of providers such as MobileVision to attract the necessary capital to deploy its already developed systems. It is essential, therefore, that this rulemaking be not simply prolonged but that the Commission decide quickly to adopt the solutions MobileVision has offered or decide to postpone any significant changes to the Interim Rules. Otherwise, the LMS services will die the slow death of day-to-day uncertainty and the public needs for such systems will continue to go unmet."

Section III of the Further Reply Comments addressing the concerns of Part 15 users is also reprinted for convenience:

"The proliferation of Part 15 devices within the spectrum allocated for LMS services, both wideband and narrowband, is undeniable. These devices, however, vary significantly in power usage and operating conditions: many are used in applications that will neither cause nor be affected by interference in relation to the operation of LMS systems; others will undoubtedly not be able to coexist on the same frequencies with such systems. All Part 15 applications within the 902-928 MHz spectrum share one common attribute -- their secondary status to LMS systems in the band.

This is not to say that the concerns of their representatives should go unrecognized. MobileVision has proposed several revisions to the present Interim Rules and the proposals contained in the NPRM that reflect those concerns. While maintaining the presence of Part 15 users throughout the spectrum, these proposals would establish 10 MHz of bandwidth that will act as a safe haven for Part 15 users from the interference of wideband systems, establish tolerance levels to permit Part 15 use throughout the balance of the spectrum where wideband systems will exist and the use of Part 15 will remain secondary,<sup>4</sup>

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<sup>4</sup> Annex 2 of MobileVision's Further Comments sets forth initial calculations of an Interference Analysis of Part 15 Devices and wideband LMS systems. Unfortunately, as of the date of these Further Reply Comments, other wideband LMS system

and require that wideband LMS providers who find that currently existing Part 15 installations above that tolerance level interfere with their licensed use defray the reasonable costs of moving such Part 15 users.

Counter to these proposals to establish the maximum usage of the spectrum and to recognize that, where possible, a balancing of competing interests in the spectrum is appropriate, are the radical positions of certain representatives of the Part 15 community who present the issues for the Commission in over-simplistic terms: them or us. The radical proponents of this cause would ignore completely the existence of the current long-standing regulatory framework. Indeed, certain of these proponents now employ the legerdemain expressed in the earlier AMTECH comments to the effect that the NPRM proposes a reduction in their current spectrum "rights." While MobileVision believes that the competing interests should be balanced equitably, the starting point for that balance is the current state of allocation and priority.

LMS offers valuable services that will (1) form an integral component of IVHS, (2) contribute to the nation's productivity in its commercial applications, and (3) address the safety and security concerns of the nation's consumers. The NPRM has already recognized that this is so.<sup>5</sup> Under MobileVision's constructive proposals, these services will be provided without significant dislocation of Part 15 users. But if, even after application of those provisions, some Part 15 devices must be relocated to the hundreds of megahertz of spectrum that has already been provided for use of Part 15 devices outside of the LMS allocated spectrum, no injustice has occurred.<sup>6</sup> These were the ground rules on which the

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providers have provided no further input as to the appropriateness of the tolerance level for Part 15 users.

<sup>5</sup> Part 15 commenters, such as Metricom, in essence argue that their services are simply more important than LMS -- a position they might well advance against any competing service in these bands but which is conceptually inconsistent with an allocation scheme in which Part 15 is secondary and unlicensed.

<sup>6</sup> For spread spectrum Part 15 devices, authorized up to 1 Watt of power, there is some 200 MHz of spectrum outside the LMS band available for use.

introduction of Part 15 was based. Their proponents should not be permitted to simply turn the world upside down because those established rules may require adjustment to their frequency use. Rather, the Commission should consider and adopt the proposals of MobileVision that seek a balance of the competing needs of all users in the 902-928 MHz spectrum."